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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,609	07/30/2003	Shouji Katsumata	115922	6115
25944	7590	05/03/2004	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			CHANG, CHING	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 05/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/629,609

Applicant(s)

KATSUMATA, SHOUJI

Examiner

Ching Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 11-13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07/30/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. ***Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Tabata et al. (JP '021).***

Tabata discloses an internal combustion engine comprising: an electromagnetically driven valve (53, 56) that serves to drive one of an intake valve (20) and an exhaust valve (30); a cam (23, 25) driven valve that serves to drive the other valve; and at least two lubricating oil passages (54, 55; and the lubrication between piston and cylinder), one of the at least two lubricating oil passages being formed to the electromagnetically driven valve independently from the other lubricating oil passage (See Figs. 2-3), further comprising: a head section that includes the electromagnetically driven valve and the cam driven valve; a block section that includes a piston and a crankshaft connected thereto (See Fig. 2); a first lubricating oil passage to the head section including the lubricating oil passage to the electromagnetically driven valve (See Figs. 2-3); and a second lubricating oil passage to the block section (See Fig. 2), the

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second lubricating oil passage being formed independently from the first lubricating oil passage.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. ***Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tabata (as applied to claim 1 above) in view of Kobayashi (US Patent No. 6,302,071).***

Tabata discloses the invention, however, fails to disclose the lubricating oil passage to the electromagnetically driven valve including a lubricating oil passage to the cam driven valve.

The patent to Kobayashi on the other hand, teaches that it is conventional in the art of an oil passage system of valve moving apparatus, to utilize a lubricating oil passage (74, 77) to the electromagnetically driven valve including a lubricating oil passage (75) to the cam driven valve.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the lubricating oil passage to the

electromagnetically driven valve including a lubricating oil passage to the cam driven valve as taught by Kobbayashi in the Tabata device, since the use thereof would provide an improved oil passage system for an engine valve moving apparatus.

5. *Claims 4-5 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tabata (as applied to claim 1 above) in view of Hu (US Patent No. 5,680,841).*

Tabata discloses the invention, however, fails to disclose the lubricating oil supplied through the lubricating oil passage to the electromagnetically driven valve having a different type from that of lubricating oil supplied through the other lubricating oil passage.

The patent to Hu on the other hand, teaches that it is conventional in the art of an engine with combined cam and electro-hydraulic engine valve control, to utilize a lubricating oil supplied through the lubricating oil passage to the electromagnetically driven valve having a different type from that of lubricating oil supplied through the other lubricating oil passage (See Col. 3, line 18 through Col. 4, line 13).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the hydraulic fluid as taught by Hu in the Tabata device, since the use thereof would provide an alternative choice of the lubricating oil for an combined cam and electromagnetically driven engine valve.

6. ***Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tabata (as applied to claim 1 above) in view of Stutzenberger (DE '500).***

Tabata discloses the invention, however, fails to disclose the lubricating oil passage to the electromagnetically driven valve and the lubricating oil passage to the cam driven valve being independently formed.

The patent to Stutzenberger on the other hand, teaches that it is conventional in the art of a camshaft driven engine valve, to utilize a lubricating oil passage (25, 28, 33) to the cam driven valve (3) being independently formed.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the lubricating oil passage to the cam driven valve being independently formed as taught by Stutzenberger in the Tabata device, since the use thereof would provide an improved electromagnetically driven and cam driven engine valves system.

Allowable Subject Matter

7. Claims 11-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Kammerdiener et al. (US Patent No. 6,655,329).
- Kaneko (US Patent No. 5,036,807).
- Bonvallet (US Patent no. 4,777,915).
- Kako et al. (US Patent No. 5,937,808).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ching Chang whose telephone number is (703)306-3478. The examiner can normally be reached on M-Th, 7:00 AM -5:00 PM.

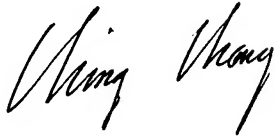
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (703)308-2623. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Patent Examiner

A handwritten signature in cursive script, appearing to read 'Ching Chang'.

Ching Chang

A handwritten signature in cursive script, appearing to read 'Thomas Denion'.

THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700